

# USMLE Step 2

1. You evaluate a 38-year-old man who complains of muscle weakness. Her appearance is remarkable for a periorbital heliotrope rash with edema and erythema on his upper chest, neck, and face. Which of the following is the most likely diagnosis?



A. polymyositis

B. dermatomyositis

C. spinocerebellar degeneration

D. vasculitis

E. rheumatoid arthritis

**Answer(s): B**

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2. Identify the defense mechanisms of a person being afraid of one's rage and anger and presenting as unusually meek and mild

A. acting out

B. altruism

C. displacement

D. intellectualization

E. passive-aggressive behavior

F. projection

G. rationalization

H. reaction formation

I. sublimation

J. suppression

**Answer(s): H**

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3. A 30-year-old woman is visiting you in your primary care office as a new patient. Overall, she is healthy. On taking a family history, you learn that her mother was diagnosed with colorectal cancer at the age of 50. When should this patient start being screened for colorectal cancer?

A. there is no proven benefit for colorectal cancer screening

B. at age 40

C. at age 50

D. at age 60

E. at age 30

**Answer(s): B**

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4. A 70-year-old man presents to urgent care complaining of a painful, swollen left knee. He previously has had no problems with this knee. Three days prior to onset, he went out dancing for 23 hours but recalls no specific injury. Examination of the knee reveals a moderate-sized effusion and mild pain with any range of motion. Plain x-ray shows no fracture. Which of the following is the best next management?

A. MRI of knee

B. aspiration of effusion fluid

C. rest, ice, and leg elevation

D. physical therapy referral

E. arthroscopy

**Answer(s): B**

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5. A 59-year-old woman complains of shortness of breath and aching left-sided chest pain that radiates to the left shoulder. Physical examination shows no abnormalities; her CXRs are shown in Figure below. Which of the following statements is true concerning this disease?



A. This tumor frequently metastasizes to distant sites.

B. Direct exposure to asbestos is required.

C. Most cases are associated with recent, massive exposure to asbestos.

D. Diffuse forms may be cured by chemotherapy alone.

E. Localized forms may be cured by surgery alone.

**Answer(s): E**

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6. A 23-year-old woman presents with "skipped heartbeats" and on cardiac examination is found to have a midsystolic click followed by a late systolic murmur. Echocardiogram shows prolapse of the mitral valve.

Which of the following is true about this condition?

A. Mitral valve prolapse is present in up to 10% of the population.

B. Mitral valve prolapse is more common in men.

C. Prophylaxis against bacterial endocarditis is never recommended.

D. Risk of pulmonary embolism is high.

E. Ventricular arrhythmias do not occur.

**Answer(s): A**

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7. A 19-year-old high school senior complains of feeling "fat and ugly" despite being extremely thin. She takes small amounts of food at meals and occasionally gags herself to induce vomiting after meals. Which of the following is commonly associated with this disorder?

A. menorrhagia

B. metrorrhagia

C. loss of body hair

D. bradycardia

E. thrombocytopenia

**Answer(s): D**

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8. A 59-year-old woman had a left modified radical mastectomy for intraductal carcinoma 2 years previously. She presents with confusion, lethargy, and thigh pain. X-rays reveal a lytic lesion in the shaft of the femur.

Which of the following blood abnormalities is most likely?

A. high glucose

B. low calcium

C. high potassium

D. high calcium

E. low magnesium

**Answer(s): D**

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**9.** A 59-year-old woman had a left modified radical mastectomy for intraductal carcinoma 2 years previously. She presents with confusion, lethargy, and thigh pain. X-rays reveal a lytic lesion in the shaft of the femur.

Which of the following is the most appropriate initial therapy?

A. radiotherapy to the femur

B. vigorous saline infusion

C. tamoxifen

D. chemotherapy

E. glucocorticoids

**Answer(s): B**

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**10.** A 55-year-old retired policeman has had hypertension for about 15 years for which he takes hydralazine. He has a 35 pack-year tobacco history and continues to smoke one pack a day. On his visit, he complains about the appearance of his nose and asks if something can be done to decrease the redness.

Which of the following statements is correct?



A. Hydralazine does not play a role in his nasal erythema.

B. Smoking probably aggravates the dilatation of the blood vessels on his nose.

C. He should avoid alcohol and spicy foods.

D. There is no effective topical therapy.

E. Laser therapy will worsen the erythema.

**Answer(s): C**

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**11.** A 46-year-old attorney is noted to have normal cholesterol levels but a very high fasting triglyceride level of 1600. He is otherwise healthy and has no risk factors for CAD. Which of the following statements is correct?

A. Hypertriglyceridemia is a strong independent risk factor for premature CAD.

B. Dietary modification is usually sufficient.

C. High triglyceride levels are associated with elevated high-density lipoprotein (HDL) levels.

D. Hypertriglyceridemia is usually associated with skin lesions.

E. Control of triglyceride levels can prevent attacks of acute pancreatitis in patients with extreme hypertriglyceridemia.

**Answer(s): E**

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**12.** A 60-year-old patient with long-standing diabetes has a creatinine of 3.6, which has been stable for several years. Which of the following antibiotics requires the most dosage modification in chronic renal failure?

A. tetracycline

B. gentamicin

C. erythromycin

D. nafcillin

E. chloramphenicol

**Answer(s): B**

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**13.** A 57-year-old man is on maintenance hemodialysis for chronic renal failure. Which of the following metabolic derangements can be anticipated?

A. hypercalcemia

B. hypophosphatemia

C. osteomalacia

D. vitamin D excess

E. hypoparathyroidism

**Answer(s): C**

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**14.** A 25-year-old man was admitted to the intensive care unit with a severe head injury, with fracture of the base of the skull. Approximately 18 hours after the injury, he developed polyuria. Urine osmolality was 150 mOsm/L and serum osmolality was 350 mOsm/L. IV fluids were stopped, and 3 hours later, urine output and urine osmolality remained unchanged. Five units of

vasopressin were intravenously administered. Urine osmolality increased to 300 mOsm/L. Which of the following is the most likely diagnosis?

A. central diabetes insipidus

B. nephrogenic diabetes insipidus

C. water intoxication

D. solute overload

E. syndrome of inappropriate antidiuretic hormone secretion (SIADH)

**Answer(s): A**

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**15.** A 70-year-old man with a 60 pack-year smoking history presents with cough and weight loss. He describes recent diffuse darkening of his skin and his CXR shows a mass suspicious for lung cancer in the left hilum. His laboratory tests reveal hypokalemia. Which of the following is the most likely histology of his lung cancer?

A. adenocarcinoma

B. small cell

C. squamous cell

D. mesothelioma

E. glioblastoma

**Answer(s): B**

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**16.** A 47-year-old man is postoperative day number 2 after an open cholecystectomy. He becomes short of breath and a medicine consultation is called to evaluate. Vital signs include a temperature of 100°F, pulse rate of 110/min, blood pressure (BP) of 110/60 mmHg, and respiratory rate of 24/min. Blood gas shows a pH of 7.52, carbon dioxide of 28, PO<sub>2</sub> of 58, and calculated bicarbonate of 20. What is the primary acid- base disorder in this patient?



A. metabolic acidosis

B. respiratory acidosis

C. metabolic alkalosis

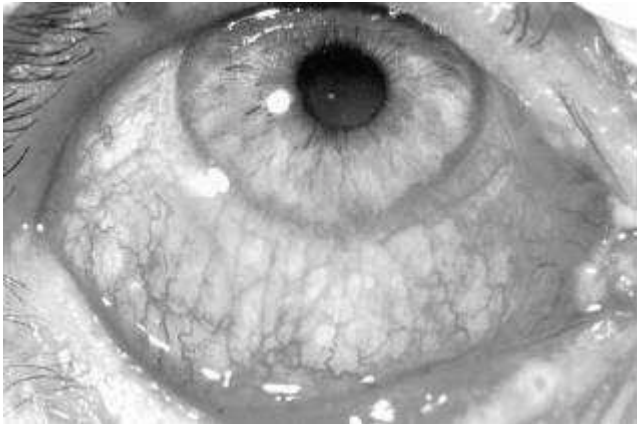
D. respiratory alkalosis

E. metabolic and respiratory acidosis

**Answer(s): D**

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**17.** A 20-year-old female presents to the office complaining that her right eye has been itchy and watery. The patient reports that the onset was abrupt. The patient is noted to be afebrile with normal vital signs. Examination discloses a red eye with watery discharge. Minimal preauricular adenopathy is also found on examination. Tonometry is normal. Profuse tearing is noted. Which of the following is the most likely diagnosis?



A. viral conjunctivitis

B. bacterial conjunctivitis

C. foreign body reaction

D. allergic conjunctivitis

E. acute open-angle glaucoma

**Answer(s): A**

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18. A 54-year-old man presents to the emergency department complaining of epigastric discomfort, which began while he was walking his dog after dinner about one-half hour earlier. He has not received medical care for several years. On examination, he is moderately obese and in obvious discomfort and seems restless. His BP is 160/98 mmHg, and his examination is otherwise unremarkable. His ECG is seen in Figure below:



Which of the following is the most likely diagnosis?

- A. gastroesophageal reflux
- B. costochondritis
- C. pericarditis
- D. inferior wall myocardial infarction
- E. anterolateral myocardial infarction

**Answer(s):** D

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19. A 54-year-old man presents to the emergency department complaining of epigastric discomfort, which began while he was walking his dog after dinner about one-half hour earlier. He has not received medical care for several years. On examination, he is moderately obese and in obvious discomfort and seems restless. His BP is 160/98 mmHg, and his examination is otherwise unremarkable. His ECG is seen in Figure below:



Which of the following is the most appropriate next step in management?

- A. trial of antacid immediately
- B. reassurance and arrange outpatient follow-up
- C. arrange for cardiac intensive care bed
- D. begin thrombolytic therapy in the emergency department
- E. arrange for urgent echocardiogram

**Answer(s): D**

**20.** A 59-year-old woman who lives independently and had been healthy, presents to the emergency department with cough and fever. She related she was well until 2 days before when she noted onset of fever, chills, and cough productive of yellow sputum. On examination, you note a tired appearing woman with BP of 160/90, pulse of 105, and respiratory rate of 32. You start her on ceftriaxone and azithromycin and admit her to the hospital. Which of the following factors is a poor prognostic sign in community acquired pneumonia?

- A. age less than 60
- B. systolic BP = 160 mmHg

C. leukocytosis = 15,000

D. respiratory rate = 32

E. mycoplasma pneumonia infected

**Answer(s): D**

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